

Hubata, S. C., A.U.S. The test is reported in *War Medicine* (January), published by the American Medical Association and the National Research Council.

The simple test will be valuable, Capt. Hubata believes, in determining whether or not a person has taken a sulfa drug.

It is made by moistening a small area on a blank strip of newspaper with a drop or two of a specimen of urine from the person being tested. A small drop of dilute hydrochloric acid, one part acid in four parts of water, is then placed on the center of the moistened

area. The immediate appearance of a yellow to orange color shows the presence of a sulfonamide compound.

The method is based on the color reaction in the presence of acids between crude cellulose, such as newspaper, match sticks or pine shavings, and the arylamine group. Paper from refined pulp, for example white bond, will not give the reaction.

The color varies from orange yellow to orange, the yellow color, or one plus reaction, being obtained from persons who have recently stopped taking a sulfa drug.

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years which show that scarlet fever consistently follows this pattern of reaching a high point in February, March and April and falling off sharply in May.

Scarlet fever is caused by a germ of the streptococcus family. Children can be immunized against it, but because the reaction may be severe, public health officials feel they cannot advise it for all children. They believe the matter should be decided in each case by the parents and physician.

Production of a relatively new type of material for scarlet fever immunization, a precipitated toxin, has been de-

GENERAL SCIENCE

A. A. A. S. To Meet

American scientists to discuss war and post-war problems in Cleveland in September, after two years without conventions because of the war.

► THE AMERICAN Association for the Advancement of Science and its numerous affiliated scientific societies will hold their first full-dress wartime meeting in Cleveland next autumn, during the week beginning Sept. 11, Dr. F. R. Moulton, permanent secretary of the Association, informed Science Service. For two years these meetings have been suspended because of the war, but it is felt now that so many scientific problems of importance to the attainment of victory and especially in the setup of the post-war world require full discussion that a gathering of this size is justified.

For many years, A.A.A.S. meetings have been held during the week after Christmas. The last one to be held, at Dallas, Texas, was during the tense Christmas week following Pearl Harbor; it had been arranged long in advance and could not well be cancelled or postponed on short notice. However, holiday-season meetings were then given up for the duration by general consent. A meeting in the early autumn is not expected to place too much of a strain on transportation or hotel accommodations.

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PUBLIC HEALTH

Scarlet Fever Epidemic

Number of cases is mounting throughout the nation. Pacific coast states report three times as many cases during past January as the same month last year.

► SCARLET FEVER cases are on the increase in all parts of the country except New England and the west southern states of Texas, Arkansas, Louisiana and Oklahoma, reports from state health officers to the U. S. Public Health Service show.

The number of cases mounted from 4,936 the week of Jan. 29 to 5,365 for the week ending Feb. 5. The five-year median figure for the first week in February is 4,037. The three Pacific coast

states reported three times as many cases during January, 1944, as during the same month last year.

The cases in the current outbreak are very mild, according to information reaching the federal health service. The peak of the epidemic is expected this month or next, with cases continuing at a high level until May, when a sharp decline is foreseen. This unusually specific prediction for the course of the epidemic is based on records for many

SCIENCE NEWS LETTER

Vol. 45 FEBRUARY 19, 1944 No. 8

The weekly Summary of Current Science, published every Saturday by SCIENCE SERVICE, Inc., 1719 N St., N. W., Washington 6, D. C. NOrth 2255. Edited by WATSON DAVIS.

Subscriptions—\$5.00 a year; two years, \$8.00; 15 cents a copy. Back numbers more than six months old, if still available, 25 cents.

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Entered as second class matter at the post-office at Washington, D. C., under the Act of March 3, 1879. Established in mimeographed form March 18, 1922. Title registered as trademark, U. S. and Canadian Patent Offices, Indexed in Readers' Guide to Periodical Literature, Abridged Guide, and in the Engineering Index.

The New York Museum of Science and Industry has elected SCIENCE NEWS LETTER as its official publication to be received by its members.

Member Audit Bureau of Circulation. Advertising Representatives: Howland and Howland, Inc., 393 7th Ave., N.Y.C., PEnnsylvania 6-5566; and 360 N. Michigan Ave., Chicago, STate 4439.

SCIENCE SERVICE

The Institution for the Popularization of Science organized 1921 as a non-profit corporation.

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FOR AIR CREWS—Head injuries from low-velocity flying fragments of anti-aircraft shells have been considerably reduced since combat plane crews have been equipped with the helmets pictured in this official U. S. Air Forces photograph. The major on the left is wearing the M3 flyers' helmet, developed by the Ordnance Department, which can be worn by most members of a plane's crew. It is a one-piece type with hinged flaps to protect the head-phones worn by airmen. The sergeant on the right wears the M4 helmet designed for gunners who have only limited space in their turrets.

layed because of war demands on the manufacturing laboratories.

Convalescent serum has also been tried to ward off attacks of scarlet fever in those known to have been exposed to a case. Since scarlet fever, however, has a short incubation period, developing within two to seven days, and usually is not diagnosed until the rash appears, it is not always possible to use the convalescent serum early enough for it to be helpful.

The disease usually starts suddenly with sore throat, nausea and vomiting and high fever. The rash appears on the first or second day, except in persons immune to this feature of the disease. Because of the danger of complications, patients should be under the care of a physician. Scarlet fever patients must be isolated. The usual quarantine period is 21 to 28 days.

Measles and Meningitis

Increasing numbers of measles and meningitis cases throughout the nation and an outbreak of typhoid fever in Indiana with a decline in deaths in 90 large

cities are also reported by the U. S. Public Health Service.

The total number of deaths in the large cities, which include about 40,000,000 of the nation's population, were 9,455 for the week ending Feb. 5, considerably below the 9,937 reported for the week ending Jan. 29 and also, for the first time in many weeks, below the three-year average for the first week in February of 9,736.

Measles cases increased from 15,403 to 18,648 for the week ending Feb. 5. The five-year median figure for this disease is 13,444. Both measles and scarlet fever cases are occurring in all sections of the country. In the nation's capital, there is more scarlet fever than in the surrounding states, with the picture just reversed for measles.

Meningitis has climbed to a very high level, with 527 cases reported the week of Jan. 29 and 571 the week of Feb. 5, compared with 330 for the first week in February, 1943.

Indiana's typhoid fever outbreak, with 70 cases the week of Feb. 5, and a total of 111 cases reported since Jan. 22, is centered around the towns of Warsaw and Peru. Cases have occurred in rural

areas in eight counties. Cottage cheese contaminated with typhoid fever germs is believed to have caused the outbreak. Preliminary investigations traced all cases to this one factor.

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STATISTICS

Cost of Raising Child On Middle Income Given

➤ FOR FAMILIES with \$5,000 to \$10,000 a year incomes, the cost of bringing up a child to the age of 18 averages \$20,785, the Metropolitan Life Insurance Company announces in a study supplementing earlier studies on the cost of child-raising with \$2,500 a year family incomes.

At the higher level, the total cost breaks down into the following: Cost of birth, \$750; food, \$3,628; clothing, \$1,697; shelter, \$5,774; education, \$283; medical care, \$846; transportation and recreation, \$2,787; sundries, \$572. Added to this is a mortality charge of \$212 and interest on the money expended, compounded annually at the rate of 2½%, of \$4,236 for the 18 years.

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HORTICULTURE

Aerosol Method Used To Secure Seedless Fruit

➤ AEROSOLS, at present used exclusively for killing germs in the air of hospital rooms and similar enclosed spaces and for combating malaria mosquitoes on the fighting fronts, may find a peacetime occupation in the treatment of plants with growth-control substances to secure seedless fruit from unpollinated flowers, to prevent premature fruit drop, and for other horticultural purposes.

This suggestion is offered by three U. S. Department of Agriculture scientists, C. L. Hamner, H. A. Schomer and L. D. Goodhue, on the basis of a series of experiments performed at the Department's great experiment station at Beltsville, Md. (*Science*, Jan. 28)

Aerosols are solutions of chemicals in some readily evaporated liquid in a container kept under relatively high pressure. When the pressure is released, the liquid is ejected into the air in an exceedingly fine mist, carrying the chemicals with it. Aerosols have been found many times more effective than ordinary sprays, as means for diffusing chemicals through spaces.